

ACD-2851

PRODUCT DATA SHEET

10.4" XGA LED BACKLIT TFT DISPLAY WITH NVIS WHITE CAPABILITY & ITO/AR BONDED GLASS

Sunlight Readability/Cool operation

GENERAL DESCRIPTION

The ACD-2851 consists of the NEC NL10276BC20-18/18C/18F XGA TFT display modified with a high performance LED backlight capable of Day and NVIS White Operation. The addition of AR bonded glass (ITO/AR) completes the display enhancement.

Customer Consigned Panel

Performance at given brightness levels

1500 cd/m² with 10.6 watts LED power (Day)
1.713 cd/m² with 0.28 watts LED power (NVIS)

Display outline identical to standard LED equipped panel

For many applications, satisfies sunlight readability goals

LCD PANEL HIGHLIGHTS

10.4" TFT Active Matrix Color

210.432 (H) mm x 157.824 (V) mm viewable area

XGA 1024 x 768 pixels, 16.7 M colors

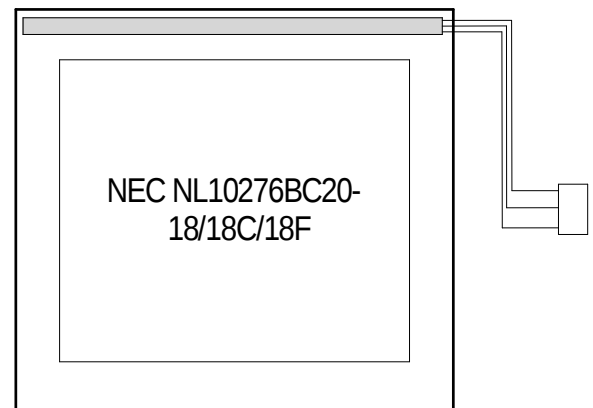
900:1 typical contrast ratio

40% color gamut (NTSC color space)

RoHS Compliant

For complete LCD specification (standard panel), refer to the NEC NL10276BC20-18/18C/18F datasheet

05/22/17



LED BACKLIGHT FEATURES

Day and NVIS LED edge-light rail

Three wire connection (Typically 11 inches long), allows simple interconnect with LED driver¹

Projected lifetime > 75,000 hours

¹ For best power transfer and control, use one ACI-2850 Dual Mode LED Driver.

MAXIMUM RATINGS

05/22/17

Symbol	Parameter	Value	Unit
Top ¹	Operating temperature of display (center of panel surface)	-30 to +80	Deg-C
Tled	Operating temperature of LED edge light (light rail contact)	-30 to +85	Deg-C
Tstg ¹	Display storage temperature	-30 to +80	Deg-C
Ifwd	LED forward current (Day)	99	mA
Ifwd	LED forward current (NVIS)	6.6	mA

*Maximum Ratings are those values beyond which damage may occur

¹Per Manufacturer's Specification

PANEL/BACKLIGHT OPTICAL CHARACTERISTICS

Ifwd(Day) = 82.5mA per bank, 2 banks per rail, 1 rail per display, Ifwd(NVIS) = 5.5mA per bank, 1 bank per rail, 1 rail per display, LED rails: ACR-2839, Ta = +25 Deg-C, moving air (36.0 CFM), min 2hr soak

Symbol	Parameter	Test Conditions	Min	Typ	Max	Unit
Bpd	Panel Brightness (Day)		1350	1500	1650	cd/m ²
Bpn	Panel Brightness (NVIS)			1.713		cd/m ²
u'd	White X coordinate (DAY)			0.189		-
v'd	White Y coordinate (DAY)			0.465		-
Rd	White radius error (DAY)				0.04	-
u'n	White X coordinate (NVIS)			0.190		-
v'n	White Y coordinate (NVIS)			0.490		-
Rn	White radius error (NVIS)				0.04	-

LED EDGE-LIGHT ELECTRICAL CHARACTERISTICS

Ifwd(Day) = 82.5mA, Ifwd(NVIS) = 5.5mA, Top = +25Deg-C

Symbol	Parameter	Test Conditions	Min	Typ	Max	Unit
Vfwd	LED rail forward voltage drop (Day mode)		58	64	70	Vdc
Vfwd	LED rail forward voltage drop (NVIS)		46	51	56	Vdc



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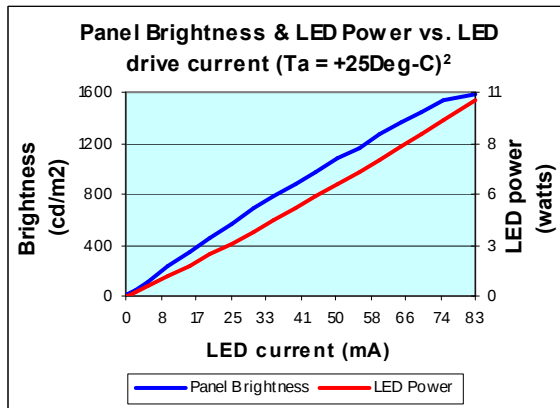
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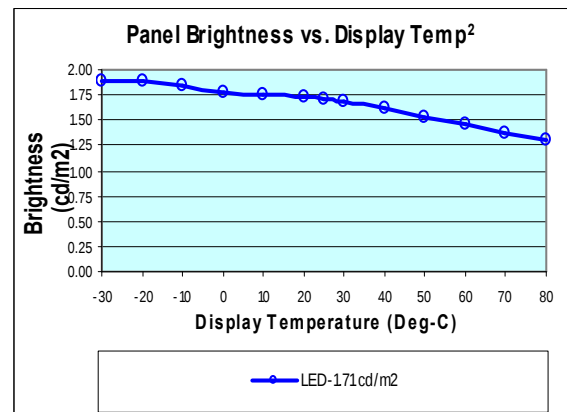
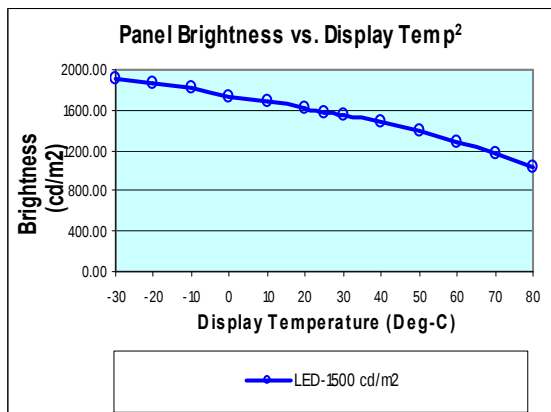
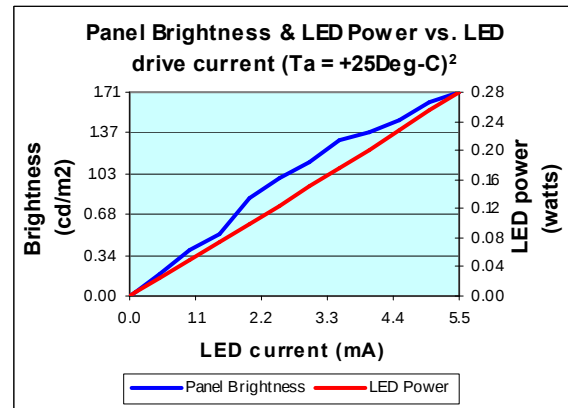
TYPICAL LCD/LED BACKLIGHT PERFORMANCE GRAPHS

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DAY



NVIS



² Moving air (36.0 CFM)



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ADDITIONAL ENHANCEMENTS

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- Copper Tape on Video Card for EMI Grounding
- Vinyl Foam Tape for Video Card spacing
- Polyimide Tape securing the Video Card
- ITO/AR Bonded Glass (Customer Supplied)